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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/577,168

04/26/2006

Michel Fauconet

FR-AM 1987NP

1103

31684

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03/19/2009

ARKEMA INC.

PATENT DEPARTMENT - 26TH FLOOR

2000 MARKET STREET

PHILADELPHIA, PA 19103-3222

EXAMINER

NAZARIO GONZALEZ, PORFIRIO

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

03/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/577,168	<b>Applicant(s)</b> FAUCONET ET AL.	
	<b>Examiner</b> PORFIRIO NAZARIO GONZALEZ	<b>Art Unit</b> 1621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "previously presented" in line 1 is not clear as to where the method as claimed was previously presented. Please clarify.

### ***Response to Amendment/Arguments***

Applicants have amended claim 17 to include the phrase "and without the introduction of external gas" as a proviso when referring to the separation column (C2). Applicants argued that said proviso distinguishes the instant claims from Hirao '648 (EP1125912, equivalent to US 6713648) in view of Dockner '865 (EP784046, equivalent to US 5817865). Here Applicants argued that Dockner '865 requires the feed of an external inert gas in the stripping column as a countercurrent to the acrylic acid/solvent stream feed to the top of the column. See Figure 2, particularly column K20. Furthermore, Applicants argued that Hirao '648 "employs a "standard" distillation column" which employees a condenser and reflux and the feed of the acrylic acid mixture is not at the top of the column. See Figure 2. The Examiner respectfully disagrees.

First, the Examiner pointed out when making the 103(a) rejection of the instant claims that Hirao '648 was deficient with respect to the rectification column without reflux and with the introduction of the products to be distilled at the top. Here, Hirao '648 uses a standard distillation column with reflux as Applicants have pointed out. However, Dockner '865 was brought to cure Hirao '648 deficiency. Here, Dockner '865 teaches the use of a desorption

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(stripping) column with no reflux having a stripping gas as a countercurrent the acrylic acid/solvent steam feed at the top of the column.

Second, In column 4, lines 14-40, particularly lines 22-26, Dockner '865 teaches the use of any inert gas or gas mixture, with preference given to using a gas mixture of air and nitrogen or recycle gas as the stripping gas. Here, Applicants are correct in that the external source of inert gas added to the stripping column is a mixture of air and nitrogen, see Figure 2. However, Applicants did not mention that another source of stripping gas could be recycling gas. Here the Examiner reads recycle gas as gas that have been in the reaction system (internal gas) and that is not introduce to the stripping column by external means. Therefore, one skilled in the art would modify Hirao'648 standard distillation column with Dockner'865 stripping column having a recycle gas as the countercurrent to the acrylic acid/solvent stream feed at the top of the column with the reasonable expectation of purifying (meth)acrylic acid. Thus, the rejection of claims 1-16 stand as being obvious over Hirao '648 in view of Dockner '865.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PORFIRIO NAZARIO GONZALEZ whose telephone number is (571)272-0641. The examiner can normally be reached on M-F (9:30 A.M.-6:00 P.M.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel M. Sullivan can be reached on 571-272-0779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PORFIRIO NAZARIO GONZALEZ/  
Primary Examiner, Art Unit 1621

PNG  
March 16, 2009